

INTELLECTUAL PROPERTY AND TECHNOLOGY  
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ASSISTANT COMMISSIONER FOR PATENTS  
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RE: PETITION TO MAKE SPECIAL UNDER 37 C.F.R. 1.102(c)

Pursuant to the requirements as set forth in the Manual of Patent Examining and Practice, Section 708.02, VI – Energy Program, we formally request the Office to make special the attached application entitled:

"METHOD AND DEVICE FOR COMBUSTING LIQUID FUELS USING HYDROGEN"

by the inventors named:

Deon John Potgeiter and Billy Freeman Hopper

The method and device presented in this application both materially contributes to the development of energy resources, namely bio-fuel oils, and the more efficient utilization and conservation of energy resources by decreasing the need for natural gas.

The invention is directed to the development of an economical and efficient means of combusting vegetable oils, a recognized renewable energy source. At present, 13 states have passed renewable portfolio standards mandating that a specified percentage of the state's total electricity be produced from renewable energy sources. This invention is designed to give these states an economic alternative to producing electricity from renewable energy sources. The invention requires only vegetable oils, water, and some small amount of electricity to combust the heavy oil fuel.

Present combustion technologies utilize significant amounts of natural gas to "co-fire" with the heavy vegetable oils. This practice prevents these combustion devices from becoming designated "all-renewable." The present invention does not require co-firing with natural gas, but rather utilizes hydrogen generated from the electrolysis of water as a means for further atomizing, vaporizing and igniting the vegetable oil. Thus, this invention 1) materially contributes to the development of vegetable oils as a viable energy source and, 2) conserves the demand for natural gas by providing an effective alternative to natural gas co-firing.

  
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